इंटरनेट मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”
Mazdoor Kisan Shakti Sangathan
“The Right to Information, The Right to Live”

“पुराने को छोड नये के तरफ”
Jawaharlal Nehru
“Step Out From the Old to the New”

IS 13742-9 (1993): Carbide Tipped Single Point Tools - ISO Series, Part 9: Boring and Facing Tool (ISO 9) [PGD 32: Cutting tools]

“ज्ञान से एक नये भारत का निर्माण”
Satyanarayan Gangaram Pitroda
“Invent a New India Using Knowledge”

Act Number 22 of 2005
The Indian Parliament
RIGHT TO INFORMATION

Made Available By
Public.Resource.Org

“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”
Bhartṛhari—Nītiśatakam
“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE

BRUTUM FULMEN
IGNORANTIA JURIS NON EXCUSAT
PROTECTED BY COPYRIGHT

IS 13742 (Part 9) : 1993
(Superseding IS 2163 : 1976)

भारतीय मानक

कार्बाइड टिपदार एक नोक वाले औजार

भाग 9 वेधन और प्रफलक औजार (आई एस ओ 9)

Indian Standard

CARBIDE TIPPED SINGLE POINT TOOLS — ISO SERIES

PART 9 BORING AND FACING TOOL (ISO 9) — SPECIFICATION

UDC 621·9·025·14 [669·018·25]

© BIS 1993

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

October 1993 Price Group 2

Single Point Cutting Tools, Carbide Tips and Indexable Inserts Sectional Committee, PE 12

FOREWORD

This Indian Standard (Part 9) was adopted by the Bureau of Indian Standards, after the draft finalized by the Single Point Cutting Tools, Carbide Tips and Indexable Inserts Sectional Committee had been approved by the Production Engineering Division Council.

Requirements of various types of carbide tips, carbide tipped tools for single point turning, planing tools, etc, both for ISO series and IND series were earlier covered in a number of Indian Standards. While considering revision of these Indian Standards based on the relevant International Standards, opportunity was taken to replace the earlier Indian Standards and published various requirements of carbide tips and tools under different parts of a rational series of Indian Standards as follows:

IS 13740 : 1993	Carbide tipped single point tools — Technical supply conditions
IS 13741 (Parts 1 to 7)	Carbide tips
IS 13742 (Parts 1 to 9)	Carbide tipped single point tools — ISO series
*IS 13743 (Parts 1 to 10)	Carbide tipped single point tools — IND series
*IS 13744 (Parts 1 to 8)	Carbide tipped single point planing tools

This standard has been revised based on present practices in Indian Industry and developments at International level. During the formulation of this standard, assistance has been derived from following International Standards issued by the International Organization for Standardization (ISO):

ISO 243 : 1975 Turning tool with carbide tips — External tools
ISO 514 : 1975 Turning tool with carbide tips — Internal tools

The other parts of this standard are:

IS 13742 (Part 1) Straight turning tool (ISO 1)
IS 13742 (Part 2) Cranked turning and facing tool (ISO 2)
IS 13742 (Part 3) Cranked finishing tool (ISO 3)
IS 13742 (Part 4) Broad turning tool (ISO 4)
IS 13742 (Part 5) Cranked facing tool (ISO 5)
IS 13742 (Part 6) Cranked turning tool (ISO 6)
IS 13742 (Part 7) Parting off tool (ISO 7)
IS 13742 (Part 8) Boring tool (ISO 8)

This standard supersedes IS 2163 : 1976.

The Committee responsible for the preparation of this standard is given at Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

---

*Under preparation.

AMENDMENT NO. 1 JANUARY 2004
TO
IS 13742 (Part 9) : 1993 CARBIDE TIPPED SINGLE POINT TOOLS — ISO SERIES

PART 9 BORING TOOL (ISO 9) — SPECIFICATION

(*Cover page and page* 1, *Title*) — Substitute '**BORING AND FACING TOOLS**' *for* '**BORING TOOLS**'.

(*Page* 1, *clause* 2) — Substitute 'IS 2428 : 1999 Application of hard cutting materials for machining, by chip removal — Designation of the main groups of chip removal and groups of application (*first revision*)' *for* 'IS 2428 : 1964 Application of carbides for machining, ranges of application and colour codes'.

(*Page* 3, *Table* 1, *col heading* 7) — Substitute 'l_2' *for* '12'.

(BP 12)

Reprography Unit, BIS, New Delhi, India

Indian Standard

CARBIDE TIPPED SINGLE POINT TOOLS — ISO SERIES

PART 9 BORING AND FACING TOOL (ISO 9) — SPECIFICATION

1 SCOPE

This standard (Part 9) covers the dimensional and other requirements of boring and facing tool (ISO 9).

2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

IS No.	*Title*
2428 : 1964	Application of carbides for machining, ranges of application and colour code
13740 : 1993	Carbide tipped single point tools — Technical supply conditions
13741 (Part 1) : 1993	Carbide tips : Part 1 Carbide tips for single point tools

3 DIMENSIONS

The dimensions for boring and facing tool (ISO 9) are given in Table 1 read with Fig. 1.

4 GENERAL REQUIREMENTS

4.1 The requirements other than dimensions are covered in IS 13740 : 1993.

4.2 The carbide tip shall be according to IS 13741 (Part 1) : 1993.

4.3 The range of application of the carbide tips shall be in accordance with IS 2428 : 1964.

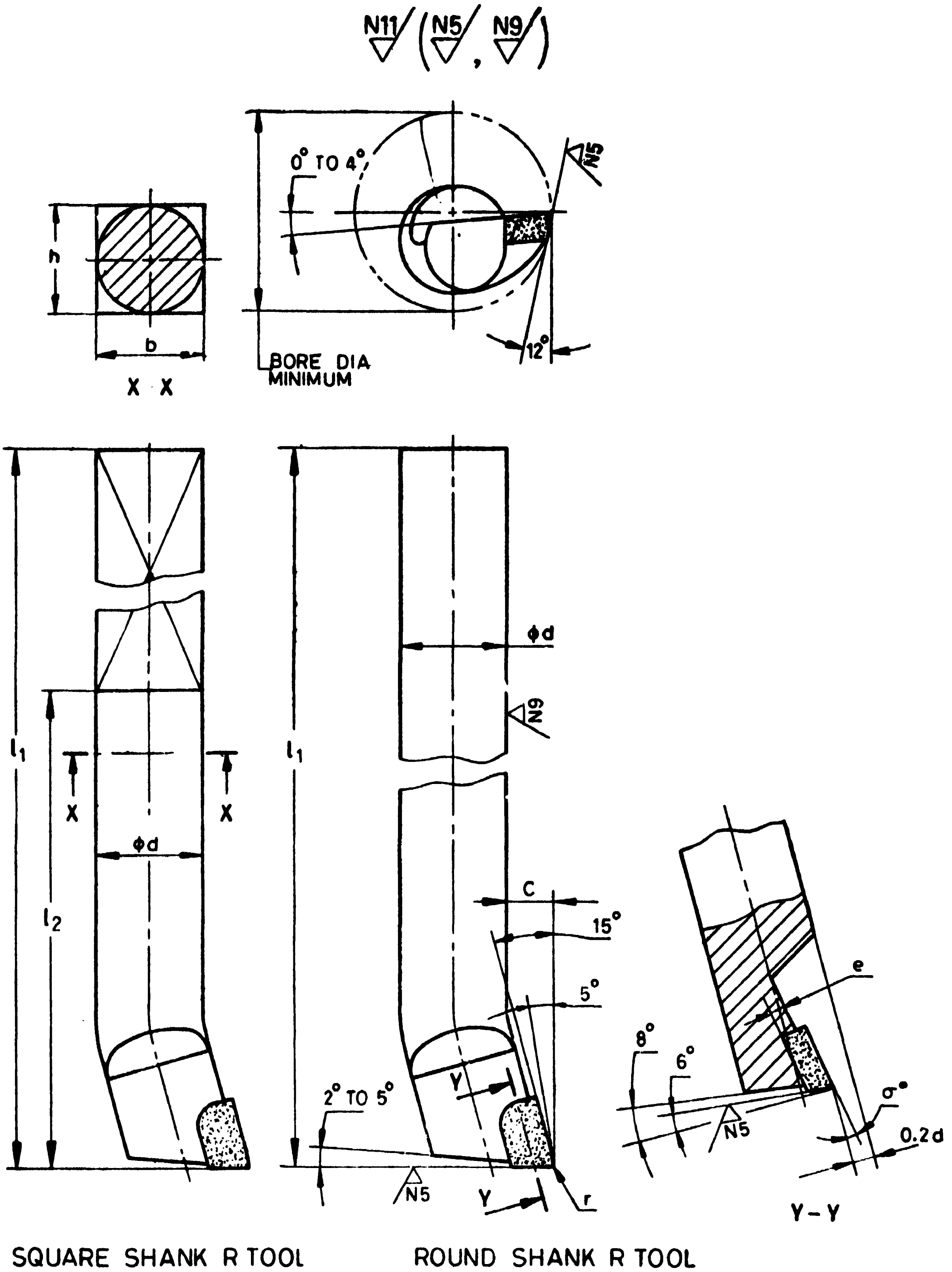
5 DESIGNATION

5.1 A boring tool ISO 9 for right-hand cutting, having shank section 1212 and carbide tip of range of application P 30, and conforming to this standard, shall be designated as:

Boring and facing tool IS 13742 (Part 9)
ISO 9-R-1212-P 30

5.2 A boring and facing tool ISO 9 for right-hand cutting, having shank diameter 12 and carbide tip of range of application P 10, and conforming to this standard, shall be designated as:

Boring and facing tool IS 13742 (Part 9)
ISO 9-R-12-P 10



All dimensions in millimetres.

Fig. 1 Dimensions of Boring and Facing Tool (ISO 9)

Table 1 Dimensions for Boring and Facing Tool (ISO 9)

(*Clause* 3)

Section		Shank			Tool Length $l_1{}^{+5\%}_{0}$	12	*C* Approx	*r* Approx	Carbide Tip	Suitable for *Min* Bore Dia
		h	*b*	*d*						
SQUARE SHANK	0808	8	8	8	125	40	3	0·2	A5	14
	1010	10	10	10	150	50	4	0·4	A6	18
	1212	12	12	12	180	63	5	0·4	A8	21
	1616	16	16	16	210	80	6	0·4	A10	27
	2020	20	20	20	250	100	8	0·4	A12	34
	2525	25	25	25	300	125	10	0·8	A16	43
	3232	32	32	32	355	160	12	0·8	A20	52
ROUND SHANK	08	—	—	8	125	—	3	0·4	A5	14
	10	—	—	10	150	—	4	0·4	A6	18
	12	—	—	12	180	—	5	0·4	A8	21
	16	—	—	16	210	—	6	0·4	A10	27
	20	—	—	20	250	—	8	0·4	A12	34
	25	—	—	25	300	—	10	0·8	A16	43
	32	—	—	32	355	—	12	0·8	A20	52

NOTES

1 Tips are partially embedded and the embedded portion '*e*' shall be 0·4 to 0·6 times the thickness of the tip. Tip for shanks 0808 to 1212 may be fully embedded.

2 The angle 6° is for cleared face of the tip. The clearance angle for the land shall be about 1° smaller.

3 'σ' shall be $10^{\circ}{}^{+2^{\circ}}_{0}$ unless otherwise specified.

ANNEX A

(*Foreword*)

COMMITTEE COMPOSITION

Single Point Cutting Tools, Carbide Tips and Indexable Inserts Sectional Committee, PE 12

Chairman	*Representing*
Shri H. R. Gupta	Widia (India) Ltd, Bangalore
Members	
Shri D. Sarathy (*Alternate* to Shri H. R. Gupta)	
Shri Suresh J. Bajaj Shri Sidharath J. Bajaj (*Alternate*)	Universal Engg and Mfg Industry, Pune
Shri S. C. Chadha Shri M. Santoor (*Alternate*)	Directorate General of Supplies and Disposals, New Delhi
Shri S. B. Datar Shri P. K. Mishra (*Alternate*) Shri R. K. R. Rao (*Alternate*)	Tata Engineering and Locomotive Co Ltd, Pune
Brig V. S. Dhawan	CQAE, Pune
Shri R. Divakara Prabhu Shri N. Srinivasamurthy (*Alternate*) Shri T. Saidulu (*Alternate*) Shri R. K. Bansal (*Alternate*) Shri K. N. Raghavendra (*Alternate*)	HMT Limited, Ernakulam
Shri C. Gangadharappa Shri T. N. Ramfsh (*Alternate*)	Motor Industries Co Ltd, Bangalore
Shri K. V. Gokhale Shri R. P. Soni (*Alternate*) Shri A. Madhusudana Rao (*Alternate*)	Bharat Heavy Electricals Ltd, Bhopal
Shri V. Jayakumar	Indicarb Limited, Hosur
Shri J. Kabilan Shri Sridhar Rao (*Alternate*)	Indian Telephone Industries Ltd, Bangalore
Shri H. B. Karmarkar Shri Rajat Basu (*Alternate*)	S. S. Miranda Ltd, Bombay
Shri L. Nagarajan Shri C. Venkatesh (*Alternate*)	Addison and Co Ltd, Madras
Shri G. J. Phfrwani Shri A. V. Gumaste (*Alternate*)	Sandvik Asia Ltd, Pune
Shri Dinesh Prasad	India Hard Metals Ltd, Calcutta
Shri Pandurangam Shri C. Venugopal (*Alternate*)	Central Institute of Tool Design, Hyderabad
Shri A. S. Pundle Shri A. Mandal (*Alternate*)	Directorate General of Technical Development, New Delhi
Shri H. S. Ramachandra Shri K. S. Naganarasimha (*Alternate*) Shri C. K. Srinivas (*Alternate*) Shri M. A. Ravindra (*Alternate*)	Central Machine Tool Institute, Bangalore
Shri Anil Sharma	Diesel Locomotive Works, Varanasi
Shri R. Sikdar	The Indian Tool Manufacturers Ltd, Calcutta
Shri V. Subramany, Director (Prod Engg)	Director General, BIS (*Ex-officio Member*)

Member Secretary
Shri K. C. Verma
Joint Director (Prod Engg), BIS

Standard Mark

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or produceres may be obtained from the Bureau of Indian Standards.

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of stadardization, marking and quality certification of goods and attending to connected matters in the country.

Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

Revision of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Handbook' and 'Standards Monthly Additions'. Comments on this Indian Standard may be sent to BIS giving the following reference:

Doc : No. PE 12 (5296)

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 11002
Telephones : 331 01 31, 331 13 75

Telegrams : Manaksanstha
(Common to all Offices)

Regional Offices :	Telephone
Central : Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110002	331 01 31 331 13 75
Eastern : 1/14 C. I. T. Scheme VII M, V. I. P. Road, Maniktola CALCUTTA 700054	37 84 99, 37 85 61 37 86 26, 37 86 62
Northern : SCO 445-446, Sector 35-C, CHANDIGARH 160036	53 38 43, 53 16 40 53 23 84
Southern : C. I. T. Campus, IV Cross Road, MADRAS 600113	235 02 16, 235 04 42 235 15 19, 235 23 15
Western : Manakalaya, E9 MIDC, Marol, Andheri (East) BOMBAY 400093	632 92 95, 632 78 58 632 78 91, 632 78 92

Branch : AHMADABAD. BANGALORE. BHOPAL. BHUBANESHWAR. COIMBATORE. FARIDABAD. GHAZIABAD. GUWAHATI. HYDERABAD. JAIPUR. KANPUR LUCKNOW. PATNA. THIRUVANANTHAPURAM.

Printed at Printwell Printers, Aligarh, India